IN THE CLAIMS

1. (Original) A distributed computer system comprising:

a source endnode including:

a source process which produces message data;

a send work queue having work queue elements that describe the message data for sending;

destination endnode including:

a destination process;

a receive work queue having work queue elements that describe where to place incoming message data;

communication fabric providing communication between the source endnode and the destination endnode; and

an end-to-end context at the source endnode and the destination endnode storing state information to ensure the reception and sequencing of message data sent from the source endnode to the destination endnode thereby permitting reliable datagram service between the source endnode and the destination endnode.

2. (Previously Presented) The distributed computer system of claim 1 wherein the source endnode includes a network interface controller which packetizes the message data into frames.

3. (Previously Presented) The distributed computer system of claim 2 wherein the destination endnode includes a network interface controller which acknowledges receipt of frames sent from the source endnode.

4. (Previously Presented) The distributed computer system of claim 3 wherein the network interface controller and the end-to-end context portion in the destination endnode ensures strong ordering of received frames sent from the source endnode, such that the frames are received in a same defined order as transmitted from the source endnode.

5. (Previously Presented) The distributed computer system of claim 3 wherein the source endnode retransmits frames that are not successively acknowledged in the reliable datagram service.

6. (Previously Presented) The distributed computer system of claim 3 wherein the network interface controller in the destination endnode generates cumulative acknowledgments.

7. (Previously Presented) The distributed computer system of claim 3 wherein the network interface controller in the destination endnode generates acknowledgments on a per frame basis.

8. (Previously Presented) The distributed computer system of claim 2 wherein the end-to-end context stores state information to keep track of sequence numbers to detect out of sequence or missing frames sent from the source endnode to the destination endnode.

9. (Previously Presented) The distributed computer system of claim 3 wherein the end-to-end context stores state information to keep track of acknowledgments sent from the destination endnode.

10. (Previously Presented) The distributed computer system of claim 3 wherein the end-to-end context stores state information to keep track of time out values.

11. (Previously Presented) A method of sending message data via a reliable datagram service from a source endnode to a destination endnode in a distributed computer system, the method comprising:

producing message data with a source process at the source endnode;

describing the message data for sending with work queue elements in a send work queue at the source endnode;

describing where to place incoming message data with work queue elements in a receive work queue at the destination endnode;

storing state information in an end-to-end context at the source endnode and the destination endnode to ensure the reception and sequencing of message data sent from the source endnode to the destination endnode; and

sending message data via the reliable datagram service between the source endnode and the destination endnode, wherein the reliable datagram service is controlled by the state information stored in the end-to-end context at the source endnode and the destination endnode.

12. (Previously Presented) The method of claim 11 further comprising:

packetizing, at the source endnode, the message data into frames.

13. (Previously Presented) The method of claim 12 further comprising:

acknowledging, at the destination endnode, receipt of frames sent from the source endnode.

14. (Previously Presented) The method of claim 13 further comprising:

ensuring strong ordering of received frames sent from the source endnode, such that the frames are received in a same defined order as transmitted from the source endnode.

15. (Previously Presented) The method of claim 13 further comprising:

retransmitting frames that are not successively acknowledged in the reliable datagram service.

16. (Previously Presented) The method of claim 13 wherein the acknowledging, at the destination endnode, includes generating cumulative acknowledgments.

17. (Previously Presented) The method of claim 13 wherein the acknowledging, at the destination endnode, includes generating acknowledgments on a per frame basis.

18. (Previously Presented) The method of claim 12 wherein the stored state information in the end-to-end context keeps track of sequence numbers to detect out of sequence or missing frames sent from the source endnode to the destination endnode.

19. (Previously Presented) The method of claim 12 wherein the stored state information in the end-to-end context keeps track of acknowledgments sent from the destination endnode.

20. (Previously Presented) The method of claim 12 wherein the stored state information in the end-to-end context keeps track of time out values.